AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A current compensation circuit ~~for use with a current mirror circuit, the current mirror circuit having a current path defined by a first current mirror stage driving a second current mirror stage, the second current mirror stage coupled to a supply voltage source, the current compensation circuit~~ comprising:

an impedance divider coupled to ~~the~~ a supply voltage source of a current mirror circuit and having an output node, the impedance divider operative to generate a compensation signal at the output node representative of voltage changes in the supply voltage source; and

a common-source gain stage having an input coupled to the output node and a current output connected to a node of the current mirror circuit ~~the current path~~, the gain stage operative to generate a compensation current for application to the node of the current mirror circuit ~~current path~~ in response to the compensation signal, the common-source gain stage comprising a first parallel array of programmable transistors for defining a predetermined range of the compensation current.

2. (Currently Amended) ~~A~~ The current compensation circuit of ~~according to~~ claim 6 ~~1~~ wherein the gain stage comprises[[:]] a common-source gain stage.

3. (Currently Amended) ~~A~~ The current compensation circuit of ~~according to~~ claim 2 wherein the common-source ~~common source~~ gain stage comprises[[:]] a first parallel array of programmable transistors for defining a predetermined range of the compensation current.

4. (Currently Amended) ~~A~~ The current compensation circuit of ~~according to~~ claim 3 wherein the ~~common source~~ common-source gain stage further comprises[[:]] a second parallel array of programmable transistors to cooperate with the first parallel array of transistors for defining a predetermined gain characteristic for the compensation current.

5. (Currently Amended) ~~A~~ The current compensation circuit of ~~according to~~ claim 1 wherein the impedance divider comprises[[:]] at least two impedance elements coupled in series between the supply voltage source and a return voltage source.

6. (Currently Amended) A current compensation circuit comprising:

an impedance divider coupled to a supply voltage source of a current mirror circuit and having an output node, the impedance divider operative to generate a compensation signal at the output node representative of voltage changes in the supply voltage source; and

a gain stage having an input coupled to the output node and a current output connected to a node of the current mirror circuit, the gain stage operative to generate a compensation current for application to the node of the current mirror circuit in response to the compensation signal

~~according to claim 1~~ wherein the current compensation circuit is formed on a single ~~integrated circuit device~~ complementary metal oxide semiconductor (CMOS) device comprising a first array of p-channel transistors and a second array of n-channel transistors.

7. (Currently Amended) ~~A~~ The current compensation circuit of ~~according to~~ claim ~~6~~ 1 wherein the current compensation circuit is formed ~~in~~ on a complementary metal oxide semiconductor (CMOS) device ~~CMOS~~.

8. (Currently Amended) ~~A~~ The current compensation circuit of ~~according to~~ claim 7 wherein CMOS device comprises a ~~the~~ first array of ~~transistors are~~ p-channel transistors, and ~~the~~ a second array of ~~transistors are~~ n-channel transistors.

9. (Currently Amended) A current compensation circuit ~~for use with a current mirror circuit, the current mirror circuit having a current path defined by a first current mirror stage driving a second current mirror stage, the second current mirror stage having a source connection tied to a supply voltage source, the current compensation circuit~~ comprising:

a means for detecting changes in ~~the~~ a supply voltage from a ~~the~~ supply voltage source of a current mirror circuit, the means for detecting changes including a means for generating a compensation signal representative of ~~voltage~~ changes in the supply voltage ~~source~~; ~~and~~

a means for generating a compensation current for application to the current mirror circuit in response to the compensation signal; and

a means for setting a range of available compensation current.

10. (Currently Amended) ~~A~~ The current compensation circuit of ~~according to~~ claim 9 wherein the means for detecting changes in the supply voltage comprises[[:]] an impedance divider coupled to the supply voltage source and having an output node, the impedance divider operative to generate a compensation signal at the output node representative of ~~voltage~~ changes in the supply voltage ~~source~~.

11. (Currently Amended) ~~A~~ The current compensation circuit of ~~according to~~ claim 9 wherein the means for generating a compensation current comprises[[:]] a common-source ~~common source~~ gain stage having an input coupled to the output node and a current output connected to the current mirror circuit, the common-source ~~common source~~ gain stage operative to generate a compensation current for application to the current mirror circuit ~~current path~~ in response to the compensation signal.

Claim 12 (Cancelled)

13. (Currently Amended) ~~A~~ The current compensation circuit of ~~according to~~ claim 11 ~~9~~ and further comprising ~~including:~~ a means for setting ~~the~~ a gain of the common-source ~~common source~~ gain stage.

Claims 14 to 19 (Cancelled)